

BANK ANALYSIS

CAMELS – Capital Adequacy

Capital adequacy is the level of capital a financial institution must maintain to be able to absorb losses of potentially materializing credit, market or operational risks. It also signals that an institution will continue to honor its obligations. Focus is on the protection of the financial institution's debt holders, especially the holders of retail deposits. The concept of capital adequacy shall also ensure the stability and efficiency of the global financial system.

It is useful to track capital adequacy with ratios that take into account the most important financial risks: foreign exchange, credit, and interest rate risks. Capital adequacy is most prominently represented by the Capital Adequacy Ratio (CAR) which measures a financial institution's capital as a percentage of its assets, whereby both, capital as well as assets, are specifically defined when using them in their respective context of a financial institution: Therefore, capital comprises a mix of equity and hybrid capital. And further, a bank's assets are actually not accounted for as per book value but instead are weighted according to their respective risks. Hence, the CAR measures a sort of leverage, with its definition basically shaped by various laws and regulations.

Capital in the context of the CAR is a complex compound of various capital layers providing long-term funding which can also absorb losses. At the moment, the Basel III framework, a widely accepted international agreement, broadly determines the definition of so-called Tier 1 and Tier 2 capital.

Basically, Tier 1 capital is (almost only) ordinary share capital (also: straight equity) that can absorb losses without requiring the bank to cease operations. Tier 2 capital is composed of all sorts of hybrid instruments / subordinated debt, which can absorb losses in the case of a bank being liquidated. Next to Tier 1 and Tier 2 capital there are various additional layers, so-called buffers, which provide extra cushion, with some of them

mandatory, such as a capital conservation buffer, and others imposed by national regulators, as required.

To determine the Risk Weighted Assets (RWA), each asset position must be weighted according to its respective embedded risk. For example, corporate bonds are generally considered more risky than government bonds or cash: Therefore, a government bond with a AA credit rating comes with a risk weighting of 0%, whilst a corporate loan rated above AA must be weighted at 20%. Or, for instance, an ordinary consumer retail loan position would be weighted with 100%. – Based on this very basic and simple illustration one can imagine how difficult it is to assess a bank's RWA, as well as its CAR, even more so from the outside: Two different banks with almost identical asset classes or volumes can consequently have a completely different RWA. – Besides, financial institutions regularly work with complex structures, such as swaps, forwards, guarantees which will also have to be adequately assessed and included in the RWA and the CAR calculations.

And finally, also market and operational risks will have to be assessed, calculated and supported with sufficient and adequate capital as per laws and regulations.

Since the financial crisis of 2008, the CAR has very much been a focus of – among others – global regulators: Back then it crystallized that banks were insufficiently capitalized. Not only was common equity deficient, but the various forms of hybrid capital which should have protected senior creditors - including depositors - proved inadequate.

Today, regulations require banks to have permanent capital of at least 8% of RWA: Of these, common, straight equity (also referred to as Core Equity Tier 1 or CET1) is the largest position, at a minimum of 4.5% of RWA, though most banks now have far higher levels. On top of that comes Additional Tier 1 capital (AT1), and Tier 2 forms the remainder of the permanent capital. In addition buffers, such as the capital conservation buffer, are either required or recommended.

BANK CAPITAL

BANK'S OWN BUFFER	1.0 - 2.0%
PILLAR 2	0 - 2.0%
SYSTEMIC RISK BUFFER	0 - 5.0%
COUNTER-CYCLICAL BUFFER	0 - 2.5%
CAPITAL CONSERVATION BUFFER	2.5%
TIER 2	2.0%
ADDITIONAL TIER 1	1.5%
COMMON EQUITY TIER 1	4.5%

$$CAR = \text{CAPITAL} / \text{RWA}$$

$$\text{DEBT EQUITY RATIO} = \frac{\text{BORROWINGS}}{\text{CAPITAL} + \text{RESERVES}}$$

$$\text{EQUITY} / \text{TOTAL ASSETS}$$

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